

# PATENT SPECIFICATION

NO DRAWINGS

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## COMPLETE SPECIFICATION

### Anticorrosive Hot-Dip Strippable Coatings

We, POLITECHNIKA WARSZAWSKA, a Body Corporate organised and existing under the laws of Poland, of Warszawa, Plac Jednosci Robotniczej 1, Poland, do hereby declare the invention for which we pray that a Patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement:—

The invention relates to anticorrosive coating compositions applicable by a hot-dip coating process to give strippable coatings.

Hitherto for the manufacture of anticorrosive coatings waxes, chlorinated paraffins and bituminous substances have been used. Coatings of this type, however, have no mechanical stability and are not sufficiently resistant to changes of temperature. Production of corrosion resistant coatings based on cellulose derivatives and polystyrene has initiated progress in this field. Particularly great importance lies in ethylcellulose mixtures, which contain besides ethylcellulose, plasticizers (phthalate, sebacates), mineral or vegetable oils, waxes, resins and several other components.

The principal disadvantage of cellulose derivatives lies in their limited thermal and chemical resistance (ethylcellulose decomposes at a temperature above 150°C), while polystyrene shows insignificant resistance to organic solvents.

The invention provides an anticorrosive hot-dip strippable coating composition comprising a mixture of polyethylene with an ester or polyester of a dicarboxylic acid as a liquid plasticizer in which the weight ratio of polyethylene to plasticizer ranges from 1:19 to 1:1.

In a coating composition can also be included any or all of vegetable, mineral and synthetic waxes, ceresine, antioxidants, fatty acids salts, inhibitors or corrosion, synthetic and natural polymers, resins, stabilizers and

dyes; not exceeding 45 percent by weight, related to the total of the mixture.

Pigments and fillers can be added in a proportion of from 0.1 to 80 percent by weight related to the final coating.

A preferred method of making the coating composition is by adding to a mixture obtained at higher temperature a mixture, composed of some of the components only or not consisting the full amount of components, the remaining parts of components at a temperature below 80°C.

Preferably according to the invention in the preparation of the coating composition polyethylene is dissolved at higher temperature in the plasticizers used, suitable plasticizers are esters or polyesters of dicarboxylic acids. A mixture of these plasticizers with any or all of vegetable, mineral and synthetic waxes, ceresine, antioxidants, fatty acids salts, inhibitors of corrosion, synthetic and natural polymers, resins, stabilizers and dyes can also be used. The proportion of the polyethylene of the whole mixture is preferably from 15 to 25% of the total mixture.

According to the purpose the proportion of components in the mixture can vary.

For example:

|                                     |  |    |
|-------------------------------------|--|----|
| —polyethylene                       | 5—50 by weight   |    |
| —plasticizers                       | 50—95 by weight  |    |
| —paraffin                           | 0—45 by weight   | 75 |
| —oils                               | 0—45 by weight   |    |
| —ancillary substances or admixtures | 0—45 by weight   |    |
| —pigment                            | 0—80% in proportion to the whole mixture of coating material + pigment | 80 |
| —filler                             | 0—80% in proportion to the whole mixture of coating material + filler. | 85 |

[Price 4s. 6d.]

A coating is described in the following Example: —

EXAMPLE.

90 Kg of octyl phthalate and 10 kg of polyethylene are loaded into a reactor and while mixing heated up to a temperature near 180°C to the moment of full dissolution of polyethylene. Thereafter the mixture is poured to special containers and cooled down to room temperature.

WHAT WE CLAIM IS:—

1. An anticorrosive hot-lip strippable coating composition comprising a mixture of polyethylene with an ester or polyester of a dicarboxylic acid as a liquid plasticizer in which the weight ratio of polyethylene to plasticizer ranges from 1:19 to 1:1.

2. A coating composition according to Claim 1, in which is included any or all of vegetable, mineral and synthetic waxes, ceresine, antioxidants, fatty acids salts, inhibitors of corrosion, synthetic and natural polymers, resins, stabilizers and dyes.

3. A coating composition according to claim 1 or claim 2, in which the admixtures do not exceed 45 percent by weight related to the total mixture.

4. A coating composition according to claim 1, claim 2 or claim 3, in which pigments and fillers are additionally added in a proportion of from 0.1 to 80 percent by weight related to the final coating.

5. A coating composition according to any one of claims 1 to 4, prepared by adding to a mixture obtained at higher temperature a mixture, composed of some of the components only or not consisting the full amount of components, the remaining component or parts of components at a temperature below 80°C.

6. A coating composition substantially as described in the Example.

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